(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 15 April 2004 (15.04.2004)

PCT

(10) International Publication Number WO 2004/032181 A3

(51) International Patent Classification⁷: H01J 61/36, 61/86, 9/32

(21) International Application Number:

PCT/IB2003/004156

(22) International Filing Date:

23 September 2003 (23.09.2003)

(25) Filing Language:

English

(26) Püblication Language:

English

(30) Priority Data: 102.45.922.3 2 Oct

2 October 2002 (02.10.2002) DE

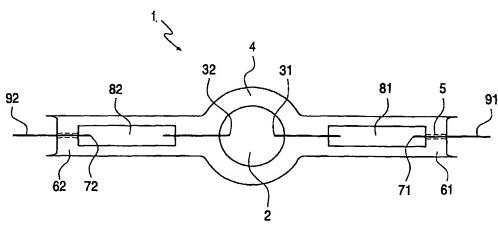
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: HIGH-PRESSURE GAS-DISCHARGE LAMP



(57) Abstract: The invention relates to a high-pressure gas-discharge lamp, having at least one gastight fused press-seal (61, 62) between a glasslike material and molybdenum, wherein the molybdenum in the fused press-seal (61, 62) is at least partly exposed to an oxidizing environment and at least that part of the molybdenum (5) that is exposed to the oxidizing environment is covered with a coating, and the coating comprises at least one oxide from among Fethe invention relates to a high-pressure gas-discharge lamp, having at least one gastight fused press-seal between a glasslike material and molybdenum, wherein the molybdenum in the fused press-seal is at least partly exposed to an oxidizing environment and at least that part of the molybdenum that is exposed to the oxidizing environment is covered with a coating, and the coating comprises at least one oxide from among Fe₂O₃, Ta₂O₅, Nb₂O₅, Al₂O₃, ZiO₂, TiO₂, ZrO₂, HfO₂, and/or one nitride from among TiN, ZrN, HfN, AlN, BN, and/or one carbide from among TiC, ZrC, HfC, VC, NbC, TaC, B₄C.

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Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 7 April 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

IB 03/04156

CLASSIFICATION OF SUBJECT MATTER PC 7 H01J61/86 H01J9/32According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 7 H01J H01K Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the International search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Y US 6 265 817 B1 (STEINMANN MAARTEN W ET 1-3,8,9AL) 24 July 2001 (2001-07-24) claims 1-3 column 4, lines 61-63 figures 2,2a Y WO 01/26129 A (KONINKLIJKE PHILIPS 1-3,8,9**ELECTRONICS N.V)** 12 April 2001 (2001-04-12) claims 1,2 figure 1 Υ US 3 105 867 A (MEIJE RIKSTERUS AUGUSTE 3 JOHANNES MARIA) 1 October 1963 (1963-10-01) claim 1 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the *A* document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the International "X" document of particular re-levance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is caed to establish the publication date of another citation or other special reason (as specified) "Y" document of particular re levance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-ments, such combination being obvious to a person skilled *O* document reterring to an oral disclosure, use, exhibition or other means in the art. document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 27 January 2005 17/02/2005 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Peters, V

INTERNA NAL SEARCH REPORT

IB 03/04156

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 6265817	B1	24-07-2001	CN WO EP JP	1275245 T 0010193 A1 1042785 A1 2002522889 T	29-11-2000 24-02-2000 11-10-2000 23-07-2002
WO 0126129	A	12-04-2001	CN DE WO EP JP US	1327609 T 60016712 D1 0126129 A1 1141992 A1 2003511819 T 6777875 B1	19-12-2001 20-01-2005 12-04-2001 10-10-2001 25-03-2003 17-08-2004
US 3105867	A	01-10-1963	CH DE FR GB NL NL	388452 A 1179297 B 1270857 A 961974 A 106429 C 243694 A	28-02-1965 08-10-1964 01-09-1961 24-06-1964